U.S. Department of the Interior • U.S. Geological Survey

MINERAL INDUSTRY SURVEYS

Gordon P. Eaton, Director — Reston, VA 20192

For information, contact:
Robert G. Reese Jr., Vanadium Specialist
Telephone: (703) 648-4981, Fax: (703) 648-7757
E-mail: rreese@usgs.gov
Eraina C. Dixon (Data), (703) 648-7959

MINES-DATA: (703) 648-7799
MINES FaxBack: (703) 648-4999
Internet: http://minerals.er.usgs.gov/minerals

VANADIUM IN MARCH 1997

The total reported consumption of vanadium in March was increased approximately 9% from that reported for February according to the U.S. Geological Survey.

During March, world vanadium prices continued to increase. U.S. ferrovanadium prices ranged from $8.60 to $9.20 per pound vanadium content compared with $7.70 to 9.10 in February. Similarly, the range for European ferrovanadium prices increased from $18.00 to $19.50 per kilogram vanadium content in February to $19.00 to $19.50 in March. For vanadium pentoxide, the March range was $3.80 to $4.08 per pound, while in February it was $3.50 to $4.00.

Prepared by the Metals Section and the Data Collection and Coordination Section, June 6, 1997.

TABLE 1
U.S. CONSUMPTION AND CONSUMER STOCKS OF VANADIUM, BY FORM 1/

(Kilograms, contained vanadium)

	1996 p/		1997			
	January - December		February		March	
	Consumption	Stocks	Consumption	Stocks	Consumption	Stocks
Ferrovanadium 2/	4,090,000	311,000	313,000 r/	357,000	339,000	387,000
Oxide	13,400	6,610	1,120	6,610	1,120	6,610
Vanadium-aluminum alloy	W	11,300	W	11,500 r/	W	12,500
Vanadium chemicals 3/	W	W	W	W	W	W
Other 4/	396,000	5,460	33,600 r/	8,760 r/	36,600	10,000
Total	4,500,000	334,000	347,000 r/	384,000	377,000	416,000

p/ Preliminary. r/ Revised. W Withheld to avoid disclosing company proprietary data; included with "Other."

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Includes other vanadium-iron-carbon alloys as well as vanadium oxides added directly to steel.

3/ Includes vanadates, chlorides and other specialty chemicals.

4/ Includes other vanadium alloys, vanadium metal, and items indicated by symbol "W."

TABLE 2
U.S. CONSUMPTION OF VANADIUM, BY END USE 1/

(Kilograms, contained vanadium)

	1996 p/	1997		
	January - December	February	March	Year to date
Steel:				
Carbon	1,640,000	106,000 r/	129,000	396,000
High-strength low-alloy	933,000	80,500 r/	90,900	256,000
Stainless and heat-resisting	21,600	1,610	2,110	5,380
Full alloy	1,050,000	74,800 r/	77,500	236,000
Tool	409,000	W	W	121,000
Unspecified	--	--	--	--
Total steel	4,060,000	263,000 r/	300,000	1,020,000
Cast irons	W	W	W	W
Superalloys	17,300	1,370 r/	1,730	4,530
Alloys (excluding steels and superalloys):				
Cutting and wear-resistant materials	245	20	20	61
Welding and alloy hard-facing rods and materials	W	W	W	W
Nonferrous alloys 2/	W	W	W	W
Other alloys	W 3/	--	--	--
Chemical and ceramic uses:				
Catalysts	W	W	W	W
Other 4/	W	W	W	W
Miscellaneous and unspecified	427,000	82,700 r/	75,500	116,000
Total consumption	4,500,000	347,000 r/	377,000	1,140,000

p/ Preliminary. r/ Revised. W Withheld to avoid disclosing company proprietary data; included with "Miscellaneous and unspecified."

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Includes magnetic alloys, except for 1996.

3/ Magnetic alloys was included in this category for 1996.

4/ Includes pigments.

TABLE 3
U. S. EXPORTS OF ALUMINUM-VANADIUM MASTER ALLOY, FERROVANADIUM AND VANADIUM PENTOXIDE (ANHYDRIDE) IN FEBRUARY 1997 1/

(Kilograms, vanadium content unless otherwise specified)

Material and country	Quantity	Value	Year to date Quantity	Year to date Value
Aluminum-vanadium master alloy: 2/				
Austria	12,200	$157,000	13,800	$161,000
Canada	9,420	112,000	12,200	148,000
Germany	--	--	4,990	98,100
Japan	--	--	1,050	13,700
Mexico	78,300	1,020,000	88,400	1,150,000
United Kingdom	19,300	333,000	32,900	567,000
Total	119,000	1,620,000	153,000	2,140,000
Ferrovanadium:				
Canada	14,400	318,000	36,800	817,000
Mexico	1,050	34,900	21,900	408,000
Total	15,400	353,000	58,700	1,230,000
Vanadium pentoxide (anhydride): 3/				
Austria	32,900	118,000	32,900	118,000
Brazil	--	--	672	6,500
Belgium	16,200	133,000	16,200	133,000
France	8,070	105,000	16,100	210,000
Germany	16,700	117,000	16,700	117,000
Italy	17,200	129,000	25,400	197,000
Total	91,200	601,000	108,000	780,000

1/ Data are rounded to three significant digits; may not add to totals shown.
2/ Gross weight.
3/ May include catalysts containing vanadium pentoxide.

Source: Bureau of the Census

TABLE 4
U. S. EXPORTS OF OXIDES AND HYDROXIDES OF VANADIUM AND VANADIUM METAL IN FEBRUARY 1997 1/

(Kilograms, vanadium content unless otherwise specified)

Material and country	Quantity	Value	Year to date Quantity	Year to date Value
Other oxides and hydroxides of vanadium:				
Canada	9,180	$56,100	36,900	$334,000
Germany	11,500	102,000	11,500	102,000
Israel	--	--	1,260	11,200
Japan	--	--	799	7,110
Korea, Republic of	788	7,010	788	7,010
South Africa	20,200	197,000	20,200	197,000
United Kingdom	1,560	6,040	1,560	6,040
Total	41,600	362,000	71,400	658,000
Vanadium metal, including waste and scrap: 2/				
United Kingdom	500	13,800	580	16,400

1/ Data are rounded to three significant digits; may not add to totals shown.
2/ Gross weight.

Source: Bureau of the Census.

TABLE 5
U.S. IMPORTS FOR CONSUMPTION OF ALUMINUM-VANADIUM MASTER ALLOY, FERROVANADIUM AND VANADIUM PENTOXIDE (ANHYDRIDE) IN FEBRUARY 1997 1/

(Kilograms, vanadium content unless otherwise specified)

Material and country	Quantity	Value	Year to date Quantity	Year to date Value
Aluminum-vanadium master alloy: 2/	--	--	--	--
Ferrovanadium:				
Austria	13,700	$224,000	13,700	$224,000
Canada	90,200	1,440,000	159,000	2,590,000
China	59,000	923,000	116,000	1,730,000
Czech Republic	--	--	16,000	228,000
Germany	--	--	3,700	72,300
Japan	--	--	225	13,700
South Africa	--	--	30,500	465,000
Total	163,000	2,580,000	339,000	5,320,000
Vanadium pentoxide (anhydride): 3/				
South Africa	73,600	919,000	94,100	1,170,000

1/ Data are rounded to three significant digits; may not add to totals shown.
2/ Gross weight.
3/ May include catalysts containing vanadium pentoxide.

Source: Bureau of the Census.

TABLE 6
U.S. IMPORTS FOR CONSUMPTION OF OTHER OXIDES AND HYDROXIDES OF VANADIUM AND VANADIUM METAL, INCLUDING WASTE AND SCRAP IN FEBRUARY 1997 1/

(Kilograms, vanadium content unless otherwise specified)

Material and country	Quantity	Value	Year to date Quantity	Year to date Value
Other oxides and hydroxides of vanadium:				
South Africa	31,200	$439,000	40,900	$561,000
Vanadium metal, including waste and scrap: 2/				
Germany	2,410	37,900	3,360	47,700
Russia	947	47,000	1,320	62,200
Total	3,360	84,900	4,680	110,000

1/ Data are rounded to three significant digits; may not add to totals shown.
2/ Gross weight.

Source: Bureau of the Census.

TABLE 7
U.S. IMPORTS FOR CONSUMPTION OF VANADIUM-BEARING ASH, SLAG AND RESIDUES IN FEBRUARY 1997 1/

(Kilograms, vanadium pentoxide content)

Material and country	Quantity	Value	Year to date Quantity	Year to date Value
Ash and residues:				
Canada	6,110	$4,190	17,800	$9,730
Mexico	104,000	212,000	149,000	334,000
Total	110,000	216,000	167,000	344,000
Ash and residues (not from the manufacture of iron and steel):				
Canada	191,000	41,400	382,000	87,000
Slag, from the manufacture of iron and steel:				
South Africa	--	--	288,000	1,150,000
Other residues: (Not advanced in value)	--	--	--	--

1/ Data are rounded to three significant digits; may not add to totals shown.

Source: Bureau of the Census.

TABLE 8
U.S. IMPORTS FOR CONSUMPTION OF MISCELLANEOUS VANADIUM CHEMICALS IN FEBRUARY 1997 1/

(Kilograms, vanadium content)

Material and country	Quantity	Value	Year to date Quantity	Year to date Value
Sulfates:	--	--	--	--
Vanadates:				
Germany	3,670	$50,900	11,000	$151,000
South Africa	22,400	159,000	22,400	159,000
Total	26,100	210,000	33,400	310,000
Hydrides and nitrides:	--	--	--	--

1/ Data are rounded to three significant digits; may not add to totals shown.

Source: Bureau of the Census.